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STAFF REPORT AND RECOMMENDATION

ON CONSISTENCY CERTIFICATION

Consistency Certification No.	CC-088-04
Staff:	MPD-SF
File Date:	2/1/2005
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Commission Meeting:	2/17/2005

APPLICANT: **Pajaro Valley Water Management Agency**

DEVELOPMENT LOCATION: From the Central Valley to the coast, parallel to and crossing the Pajaro River and throughout the Pajaro Valley, City of Watsonville and unincorporated areas of Monterey and Santa Cruz Counties (Exhibits 1-2)

DEVELOPMENT DESCRIPTION: Pajaro Valley Basin Management Plan to import water to support agriculture and halt salt water intrusion into Pajaro Valley groundwater basin, including Import Pipeline, Coastal Distribution Systems, and other water supply and distribution facilities (Exhibits 2-5)

SUBSTANTIVE FILE DOCUMENTS: See page 39.

EXECUTIVE SUMMARY

The Pajaro Valley Water Management Agency (PVWMA) proposes to import Central Valley Project (CVP) water to the Pajaro Valley, for the purpose of maintaining the viability of agriculture in the region and ameliorating the serious seawater intrusion problem facing the valley. The Pajaro Valley is one of the preeminent agricultural regions in the state's coastal zone, and Coastal Act policies urge the protection and maintenance of agricultural viability and the prevention of degradation of groundwater basins. As such, the project's overall goal is consistent with several Coastal Act priorities articulated in the agricultural protection policies (Sections 30241 and 30242) and the water quality policy (Section 30231 – prevent depletion of ground water supplies).

At the same time, importing water raises significant concerns over whether the project will induce growth and urban development, which could harm agricultural viability, and whether it will induce new agricultural activities on lands now not in production, which may contain sensitive wildlife habitat and/or wetlands, or steep slopes on which future activities could increase erosion and sedimentation into the Valley's extensive wetlands complex.

PVWMA believes that these concerns are addressed through its underlying enabling legislation, which provides that "…no water shall be imported into the agency for other than agricultural purposes …," combined with the fact that the water would not be treated to potable standards. PVWMA thus believes that, for both legal and practical purposes, the water would be limited to serving existing agricultural operations. PVWMA has also committed, in its EIR/EIS for the project, that:

> *PVWMA will not deliver water for the purpose of converting any native lands to agriculture uses unless and until the project sponsor has complied with the Endangered Species Act and has determined that such conversion will not likely affect listed species or that appropriate mitigation has been provided. PVWMA intends to provide CVP water to existing irrigated agricultural lands. PVWMA currently is not proposing to provide any CVP water for M&I purposes, nor is it proposing to provide CVP water outside of the approximately 30,200 acres of agricultural lands shown in* … [Exhibit 6].

Essentially, PVWMA is relying on existing (and future) land use regulatory controls to assure these commitments remain effective. The issue before the Commission is not the appropriateness of the project, as without imported water agricultural viability will be seriously undermined by continuing and increasing groundwater withdrawals. The issue instead is whether additional commitments are needed to provide assurances that the water will in fact be used for the intended purposes, and that "agricultural purposes" be appropriately defined. Accordingly, the Commission staff has been working with PVWMA on an agreement that would address these Coastal Act issues and help offset concerns about currently unintended use of the water. To date, PVWMA has:

1) Reiterated that PVWMA's enabling legislation (Statues of 1984, Chapter 257) prohibits the use of imported water for other than agricultural purposes.[1]
2) Agreed that agricultural uses shall be as defined in the definition chapters of the Santa Cruz and Monterey County LCPs, "with the understanding that a number of the uses potentially allowable in areas zoned for Agriculture under these LCPs would not be

1 With the exception noted in the footnote on page 29 for the Aromas County Water District at the far eastern end of the Valley (although PVWMA is not treating that water either to potable standards).

eligible for imported water from this project (such as residential, municipal/ or industrial uses)."

3) Agreed that the water "is intended to serve areas already in agricultural production, and the project would not require nor result in direct land use changes with associated significant environmental effects, such as the conversion of environmentally constrained (i.e., by the presence of, and/or setbacks associated with, wetlands, sloughs, other sensitive habitats, steep slopes, significant trees, etc.) and/or undeveloped, 'native' lands that might affect biological resources."
4) Recognized that the entire project is subject to the federal consistency provisions under the Coastal Zone Management Act, and, further that any additions or changes to the project that would affect its consistency with the California Coastal Management Plan will be subject to the 'reopener' procedures contained in 15 CFR Part 930, Section 930.66.
5) Agreed to submit project plans to the Commission staff for review, including showing user connection points, and has agreed to submit any substantial changes to the plans.
6) Agreed to submit annual monitoring reports to the Commission staff for review, which will include available data regarding: the volume and type of water inputs in the Project, including the amount of water supplied from import (Central Valley Project or otherwise), groundwater pumping, and other sources (e.g., Harkins Slough project, Recycled Water Facility, other); any treatment applied to Project water; Project water use; significant changes in cropping**;** changes in saltwater intrusion and any substantial Project changes in the preceding year. The submittal shall include a report on PVWMA's conservation programs in a format consistent with USBR requirements, and the latest version of the map depicting the postulated extent of the seawater-intruded zone (based on coastal wells with elevated chloride levels).
7) Agreed that: (i) any substantial changes to Project components within or affecting the coastal zone will be subject to the above project clarifications and commitments; (ii) PVWMA will incorporate these project clarifications and commitments as legally enforceable components of the project description for any such change; and (iii) any changes to these project clarifications and commitments will not be effective without the written approval of the Commission staff. (see Exhibit 20 for the specific language of the agreement, which also includes discussion of what PVWMA considers would constitute a substantial deviation or modification.)

While these agreements go a long way towards addressing the project's Coastal Act concerns, additional language is needed to strengthen the land and water use restrictions and thereby assure the project will avoid inducing non-agricultural development and increased agricultural development on lands not currently in production and containing environmentally sensitive habitat or other sensitive coastal resources. In order to bring the project into conformance with the applicable Coastal Act policies, the following condition is necessary:

1. **Water Use Restriction**. Except as may otherwise be authorized by the Coastal Commission in future reviews of proposed project changes, and except for those lands with the Aromas County Water District outside of the coastal zone, the Pajaro Valley Water Import/Distribution Project shall be limited to the supply and distribution of non-potable water within those portions of the PVWMA District in the coastal zone, as delineated as of February 17, 2005, for the purposes of supporting agricultural land uses and groundwater management (i.e., addressing basin overdraft and seawater intrusion), except that in no case shall water be used to support expansions of the agricultural operations into areas where such expansion would result in adverse biological and other environmental effects, such as the conversion of environmentally constrained (i.e., by the presence of, and/or setbacks associated with, wetlands, sloughs, other sensitive habitats, steep slopes, significant trees, etc.) and/or undeveloped native land to agricultural production.

The Commission is therefore concurring with this consistency certification as conditioned. If this condition is accepted, when combined with: (1) the mitigation commitments made through the project EIR/EIS (Exhibit 17) and the Section 7 consultations with the U.S. Fish and Wildlife Service and NOAA Fisheries (Exhibits 18-19); (3) conditions imposed by coastal permitting agencies; (4) with the review opportunities available for further refinement and specificity available through the regulatory processes to come in the coastal zone; and (5) the potential protection retained through the federal consistency "reopener" clause, the project will improve agricultural viability, halt seawater intrusion, and avoid indirect effects of inducing growth or agricultural extensions into lands not currently in production. As conditioned, the project would therefore be consistent with the requirements of Section 30241 and 30242 (agricultural protection), 30240 and 30233 (environmentally sensitive habitat and wetlands protection), 30230 and 30231 (water quality protection, including prevent groundwater intrusion), 30222 (priority of agriculture), and 30250 and 30254 (concentration of development, public works facilities, growth inducement, and reservation of limited public services for priority uses). If PVWMA does not accept this condition, the Commission's decision is treated as an objection, and the PVWMA has the ability to appeal the objection to the Secretary of Commerce (as discussed on page 18).

Also, the Commission wishes to be clear that the reopener clause is available and will be relied on for future project changes affecting the coastal zone, including any potential use of the imported water to serve non-agricultural uses. The Project as now defined will provided water strictly for agricultural use. As such, it does not currently propose or presume that Project water might be directed to urban use. In fact, this is the crux of the agreement worked out between Commission staff and PVWMA. Despite this agreement, it is possible that there may be pressure in the future to use some of the water for urban uses. This can already be seen by the fact that the PVWMA legislation already included the rider to allow water to be delivered to the Aromas Water District. The other surrounding water districts are all struggling with the question of how they intend to meet current and projected urban demands, and it is possible that some will look to the CVP water pipeline project as an attractive supply option in this respect. While not condoning or prejudging future changes to this project to allow such urban

uses, it needs to be clear that such potential project changes would be subject to the reopener provisions and would need to be accompanied by the same level of project commitment to protect agriculture and be consistent with Coastal Act and relevant LCPs as applicable.

I. STAFF SUMMARY AND RECOMMENDATION:

A. Project Description. The Pajaro Valley Water Management Agency (PVWMA) proposes to construct a water supply system designed to alleviate saltwater intrusion into the groundwater basin in the Pajaro Valley in Monterey and Santa Cruz Counties. The project includes water importation and distribution features, as well as water recycling, water conservation, and water quality components. With agriculture as the predominant water user in the Valley, the primary project purpose is to provide coastal agricultural users with an alternative source of water supply and cease groundwater pumping in critical coastal areas. Based on currently-understood needs the project goal is to provide 17,400 AFY,[2] which would be supplied through a combination of 13,400 AFY of imported Water; and 4,000 of recycled/blended water. Added to the 1,100 AFY supplied by the already authorized and constructed Harkins Slough project (see also below), this would provide a total of 18,500 AFY, the amount PVWMA estimates is needed to serve agricultural uses and create sufficient hydrostatic pressure to keep saltwater intrusion from increasing.

The Project involves several components including: (1) the Harkins Slough Local Water Supply Project; (2) construction of an import pipeline to bring water to the PVWMA service area via Central Valley Project (CVP) facilities in San Benito County (the Import Pipeline Project); (3) construction of a recycled water facility to reclaim wastewater from the Valley (the City of Watsonville's wastewater treatment facility Recycled Water Project, and (4) construction of a coastal distribution system ("CDS") to deliver blended water to coastal agricultural facilities. Approximately 4,000 feet of the Import Pipeline, the CDS and the Recycled Water Facility are located within the coastal zone in southern Santa Cruz County and northern Monterey County. The Project will deliver water to growers in the coastal area roughly bounded by Monterey Bay to the west, Highway 1 to the east, Elkhorn Slough to the south, and Buena Vista Drive and Harkins Slough Road to the north. The project will also supply agricultural operations outside the coastal zone, and will contain a number of features, including the import line itself from the central valley, located outside the coastal zone.

Construction of the project will be implemented in phases. The Harkins Slough Local Water Supply Project and a part of the CDS have already been built.[3] Construction on the remainder of the Project will occur in phases over several years, beginning in 2005. Construction of the Recycled Water Facility is planned for 2006. More specifically:

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[2] An acre-foot of water is equal to 43,560 cu. ft., 1233.49 cu. meters, or approximately 325,850 gallons.

[3] Activities planned or already constructed within the Santa Cruz County portion of the coastal zone are addressed in Santa Cruz County Coastal Development Permit Nos. 99-0335 and 04-0258, and Coastal Commission authorization 3-99-008-W.

Phase 1 of the project has already received authorizations and is partially constructed (Exhibit 4); this phase includes the Coastal Distribution System (Harkins Slough and Accelerated Pipeline portions), a water conservation program, and the Harkins Slough Project with Harkins Slough Recharge Basin, Supplemental Wells, and Connections (1,100 AFY).

Phase 2, which is planned for the near future and which provides the primary backbone for the project, and is thus the primary focus of this consistency certification, would consist of Remaining portions of the Integrated Coastal Distribution System (ICDS), the Import Water Project with Out-of-Basin Banking (13,400 AFY) and Supplemental Wells, a Water Recycling Project (4,000 AFY), and an as-yet-to-be-developed Watershed Management Programs (e.g., nitrate management).

Phase 3, scheduled for post-2007 and not yet designed and analyzed, would consist of Wells for conjunctive use of CVP water, Inland Distribution System, an inland College Lake water storage project), a Watsonville Slough surface water diversion project, and a Murphy Crossing surface water diversion project.

The project EIR/EIS describes Phase 2 (also called "Alternative B") as including the construction and operation of the following facilities:

1. *Water Recycling Facility*
2. *Pipeline connecting the Water Recycling Facility to the Import Pipeline and the Integrated Coastal Distribution System (ICDS)*
3. *Five supplemental wells*
4. *Import Pipeline (54-inch diameter)*
5. *ICDS*
6. *Connection of the pipeline to the Santa Clara Conduit*
7. *Delivery to and use of import water in the Pajaro Valley*

The project EIR/EIS further specifies:

Under this alternative, recycled water and imported surface water would be used in lieu of groundwater, when available, allowing for natural recharge of the groundwater basin. During droughts and dry periods, when little or no surface water may be available, Pajaro Valley would then pump the groundwater that was "saved" or "banked" during wet periods.

The proposed Watsonville Area Water Recycling Project (herein referred to as the Water Recycling Project) would involve construction of tertiary treatment facilities at the WWTF [Watsonville Wastewater Treatment Facility] *and pumping, blending, storage, and distribution facilities. Recycled water would be used only during the irrigation season (generally April through October). Components include:*

- *Watsonville Wastewater Treatment Facility – Water Recycling Facility. … Construction of tertiary treatment, pumping, storage, and associated facilities (the Water Recycling Facility) would require acquisition of eight acres of land from adjacent agricultural areas.*

- *Pipeline Connections to Import Pipeline and the Integrated Coastal Distribution System. The Water Recycling Project includes approximately 4,200 feet of 24-inch-diameter pipeline to connect the Water Recycling Facility to the Import Pipeline and/or to the Monterey and Santa Cruz Service Areas of the ICDS.*

- *Supplemental Wells, Laterals. Figure 2.2* [Exhibit 5, p. 2] *indicates the area within which up to five wells to produce blending water would be sited. Wells would be spaced approximately 2,000 feet apart, within a boundary extending 1,000 feet on each side of the Import Pipeline, extending four miles east from State Route (SR) 1. These wells would be located within unincorporated areas in Santa Cruz and Monterey Counties. …Lateral pipelines would connect the wells to the Import Pipeline.*

BLEND WATER OPTIONS

As mentioned previously, the recycled water would likely have a TDS level too high for certain crops in the Pajaro Valley. Thus, a source of lower-TDS water is necessary, which would be blended with the recycled water to achieve an overall goal of 500 mg/L TDS. The two potential sources of blending water are imported surface water and groundwater.

Operational Strategy

PVWMA's operational strategy is based on supplying 18,500 AFY of water to the coastal area via the ICDS. The quantity of water by source would vary based on rainfall, as follows:

- *Average Rainfall Years. CVP deliveries (and potentially non-CVP import water) plus water from the Harkins Slough project, the Supplemental Wells, and the Water Recycling Project would provide the water required to meet ICDS demand. Harkins Slough and the Supplemental Wells would be used to meet peak delivery requirements.*

- *Above-Normal Rainfall Years. CVP deliveries (and potentially non-CVP import water) plus water from the Harkins Slough project and Water Recycling Project are expected to exceed ICDS demand. CVP deliveries above demand would be banked with a CVP contractor through an out-of-basin banking agreement. Inland farms with turnouts off the Import Pipeline could receive CVP supplies.*

- *Below-Normal Rainfall Years. PVWMA would receive minimal amounts from the CVP system. Additional import water would be received through out-of-basin agreements.*

PVWMA would also withdraw water from the Supplemental Wells. These banked supplies would augment surface water and recycled water to meet ICDS demand. Inland farms may be requested to use their existing wells during peak demand conditions. During the most severe dry-weather years, the Harkins Slough project is not expected to provide any water.

Import Pipeline

The Import Pipeline would link the Pajaro Valley with the Santa Clara Conduit of the San Felipe Unit facilities. The San Felipe Unit of the CVP supplies water to Santa Clara Valley, the northern portion of San Benito County, the southern portion of Santa Cruz County, and the northern edge of Monterey County. The design capacity available to PVWMA in the Santa Clara Conduit is 67 cfs, equal to approximately 4,500 to 4,600 af per month. The pipeline would extend from the existing Watsonville turnout across portions of San Benito, Santa Clara, Santa Cruz, and Monterey Counties and would connect with the ICDS near SR 1.

Pipeline Design Characteristics

The proposed 22.2-mile-long Import Pipeline would consist of pipe segments 16 to 18 feet in length. The maximum pipe diameter would be 66 inches; however, pipe diameter may be reduced to 48 inches in areas where accessibility to the site and easement width is constrained (e.g., at Pajaro River crossings and near Chittenden Pass). The entire pipeline would be located underground beneath 5 to 10 feet of cover.

Typical Construction Methods

Along most of the alignment, the pipe would be installed in a trench with 2:1 sideslopes, with 1 foot of bedding material below the pipe and 5 feet of cover material. In general, the pipeline alignment is located in open areas where conventional excavation methods can be used for opencut (open-trench) pipeline installation.

Special Construction Methods

River and Stream Crossings. *The proposed pipeline alignment includes open-trench crossings of the Pajaro River near the Graniterock quarry property, Pescadero Creek, Sargent Creek, two unnamed tributaries to the Pajaro River near Pescadero Creek, an unnamed drainage east of Soda Lake, and a small channelized drainage west of Aromas. All river and stream crossings are proposed to occur during the dry season. If water flows persist within the channels at the time of construction, sheetpile cofferdams would be installed in a portion of the channel and the construction area would be dewatered.*

Two crossings of the Pajaro River (west of U.S. 101 and west of SR 1) and a crossing of Millers Canal would be constructed using trenchless methods. Microtunneling or directional drilling is proposed for these crossings.

UPRR and Highway Crossings. *The pipeline alignment would cross three major roadways*: *U.S. 101,SR 129, and SR 25. Tunneling or bore-and-jack techniques would be used at these crossings to prevent disruption of traffic flow.*

INTEGRATED COASTAL DISTRIBUTION SYSTEM

The purpose of the ICDS is to deliver water to growers in the coastal area roughly bounded by Monterey Bay to the west, SR 1 to the east, Elkhorn Slough to the south, and Buena Vista Drive and Harkins Slough Road to the north. Growers in this area would take their wells out of service, thereby reducing the groundwater pumping rate. The ICDS consists of facilities required to provide complete irrigation to approximately 10,000 acres (gross), approximately 8,960 acres (net), with imported water supplies. Facilities include:

- *Pipelines*
- *Pump stations*
- *Turnouts*
- *Crossings*

In addition to blended recycled water and imported water, the ICDS has a third supply source: the Harkins Slough diversion project. The Harkins Slough project was completed in 2001, and with it segments of the ICDS, to deliver water to nearby growers. Figure 2.11 [Exhibit 5] *indicates those pipeline segments that have already been permitted and constructed.*

Pipelines

The proposed ICDS contains a total of approximately 165,670 linear feet (lf) of pipeline and is divided into two service areas: Santa Cruz and Monterey.

Turnouts

A total of 127 turnouts are included in the ICDS. These turnouts are located at sites along the ICDS laterals and at the terminus of each sub-lateral.

Pajaro River

The ICDS would cross the Pajaro River to deliver blended water to Santa Cruz County. Crossing of the river is assumed to be accomplished using microtunneling, due to the length and depth of the crossing and diameter of the casing pipe. …

B. <u>Background</u>. The Pajaro Valley Water Management Agency (PVWMA) is a State-chartered local agency established in 1984 and responsible for managing groundwater resources in the Pajaro Valley, a predominantly agricultural region in southern Santa Cruz/northern Monterey Counties. The PVWMA service area (Exhibits 1-2) encompasses approximately 79,600 acres of irrigated agricultural lands, native and non-irrigated lands, the City of Watsonville, and unincorporated rural communities. Agriculture is the most significant economic industry in the valley. High value crops include strawberries, bush berries, lettuce, apples, flowers, artichokes and a variety of other vegetables. To date the Valley is fully dependent on groundwater to supply its water needs.

In the coastal areas and throughout much of the groundwater basin of the Pajaro Valley, groundwater overdraft has caused groundwater levels to drop below sea level, creating a landward pressure gradient that causes seawater from the Pacific Ocean to move inland, where it mixes with fresh groundwater. Seawater intrusion is increasingly degrading groundwater quality, limiting the utility of groundwater for irrigation and domestic purposes (Exhibits 9-10). The region's problems due to groundwater overdraft and seawater intrusion were first documented in 1953. A later 1964 Bureau of Reclamation feasibility study also confirmed the overdraft and seawater intrusion problems, and in 1975 the U.S. Bureau of Reclamation indicated its intent to deliver CVP water to Santa Cruz and Monterey Counties to help solve seawater intrusion problems. At that time, the Bureau of Reclamation committed 19,900 acre-feet per year (AFY) of federal CVP water to the Pajaro Valley, for which PVWMA holds an entitlement.

PVWMA's stated purpose is to prevent further overdraft of the groundwater basin and halt seawater intrusion through providing quality surface water and recycled water for the long-term sustainability of agricultural irrigation and production in lieu of existing groundwater pumping. PVWMA further states the purposes of the Water Supply Project are:

- To prevent long-term seawater intrusion, groundwater overdraft, land subsidence, and water quality degradation;

- To manage existing and supplemental water supplies to control overdraft and to provide for present and future water needs;

- To create a reliable, long-term water supply, which has been identified as an important cornerstone of the long-term economic vitality of agricultural business in the Pajaro Valley;

- To develop water conservation programs; and

- To recommend a program that is cost effective and environmentally sound.

Elevated chloride concentrations in well water samples are typically relied on as an indicator of seawater intrusion. The average concentration of chloride in seawater is 19,000 mg/L. Chloride levels exceeding approximately 100 mg/L in coastal wells indicate that seawater is present, and irrigation water is likely to increase problems for agriculture when chloride levels

exceed 142 mg/L (Exhibit 11). High-quality drinking water generally contains chloride concentrations below 50 mg/L, and irrigation water quality guidelines suggest chloride concentrations should not exceed 142 mg/L. Water with over 250 mg/L of chloride is generally unsuitable for use.

Exhibit 10 (EIS Figure 1.2) presents the postulated movement of seawater intrusion based on chloride concentrations measured in well water samples (PVWMA, 2000b). Even with aggressive conservation efforts, PVWMA has established that these conditions will not improve without the elimination of groundwater pumping in areas adjacent to the coast and development and delivery of additional water supplies, or fairly drastic curtailment of agricultural operations in the valley. (Groundwater intrusion can also cause problems such as increased pumping costs and land subsidence, which in turn can cause building settlement and increased flooding.)

Exhibit 8 (EIS Figure 1.3) shows the historic groundwater pumping patterns in the Valley, overlain by the PVWMA's estimated sustainable[4] groundwater supply (24,000 AFY). [see staff note, page 13] Demand, which PVWMA estimates is currently approximately 70,000 AFY, clearly far exceeds PVWMA's estimate of sustainable yield.

Exhibit 8 (EIS Figure 1.3) shows the historic groundwater pumping patterns in the Valley, overlain by the sustainable groundwater supply (24,000 AFY). Demand, which PVWMA estimates is currently approximately 70,000 AFY, clearly far exceeds the sustainable yield, as is the case for every year depicted in Exhibit 8 (Figure 1.3). PVWMA estimates conservation measures could only realistically reduce groundwater demand by 5,000 AFY. The difference between total groundwater demand (69,000 AFY) and a basin sustainable yield of 48,000 AFY is 16,000 AFY. Groundwater modeling results indicate that PVWMA needs to supply a total of 18,500 AFY to the coastal area in order to create a hydrostatic barrier to prevent further seawater intrusion into the groundwater basin while also meeting near-term (2007) demand. The Harkins Slough project will supply approximately 1,100 AFY of the 18,500 AFY needed; PVWMA proposes to obtain the balance – 17,400 AFY – via CVP water and other imported water and recycled water.[5]

Table 1.1 below shows existing and projected future water use in the PVWMA service area (see also, Exhibit 7 – EIS Table 1.4). Total current water use is approximately 71,500 AFY. Groundwater pumping provides over 95 percent of this current demand, or an estimated 69,000 AFY. Approximately 2,100 AFY from local surface water diversions are used (Watsonville diverts approximately 1,100 AFY from Corralitos Creek, and agricultural users are projected to

[4] See staff note regarding "sustainability" on page 13.

[5] As Table 1.4 (Exhibit 7) indicates, additional supplies would need to be developed to meet long-term (2040) demand. PVWMA will evaluate the need for additional water supply projects (see Phase 3 projects in Table 1.3 (page 14) after 2007, based on future water supply and demand conditions).

divert another 1,000 AFY from local surface waters). PVWMA projects a 9,000 AFY increase in water demand by 2040. Urban demand represents about 3,900 AFY of the projected increase, while agricultural demand represents about 5,100 AFY of the increase. According to PVWMA's Water Conservation 2000 report, water conservation by PVWMA (for agricultural uses) and the City of Watsonville (for urban uses) is expected to reduce demand by approximately 5,000 AFY.

TABLE 1.1

EXISTING AND FUTURE WATER USE WITHIN PVWMA AREA

	Current (2001) Conditions (AFY)[a]	Future (2040) Conditions (AFY)[a]
Demand[b]		
Agricultural Uses	59,300	64,400
Urban Uses	12,200	16,100
Total Demand Before Additional Conservation	**71,500**	**80,500**
Conservation		
Increased Agricultural Conservation (To be achieved by 2010)	4,500	4,500
Increased Urban Conservation (To be achieved by 2010)	500	500
Total Additional Conservation	**5,000**	**5,000**
Project Total Demand with Additional Conservation	**66,500**	**75,500**

[a] Values rounded to the nearest hundred to represent the values' significant accuracy.
[b] Current demand is based on current pumping (estimated at about 69,000 AFY) and surface water diversions.

SOURCE: RMC, Inc., 2002

PVWMA also notes that:

> *… under current pumping practices, a 65 percent reduction in basinwide groundwater pumping (45,000 AFY) is necessary to eliminate seawater intrusion. Under this scenario, the sustainable yield of the groundwater basin is approximately 24,000 AFY (69,000 AFY minus 45,000 AFY), or approximately one third of the current average annual demand on groundwater supplies (refer to Table 1.2 [below]). However, the basin sustainable yield could be doubled if pumping in the areas adjacent to the coast were eliminated and replaced by an alternative supply. The basin sustainable yield estimated for this scenario is 48,000 AFY. The modeling indicates that elimination of groundwater pumping in the coastal area would allow groundwater levels in the area to increase, thereby creating a hydrostatic barrier that would prevent further seawater intrusion. This scenario requires*

a firm (100 percent reliable) supplemental water supply with very little variation in year-to-year availability and construction of a coastal distribution system to provide coastal agricultural users with water.

TABLE 1.2
SUSTAINABLE YIELD

	Assuming Basinwide Pumping Reductions (AFY)	**Assuming Pumping Eliminated Along the Coast (AFY)**[a]
Total Groundwater Pumping	69,000	69,000
Pumping Reduction Needed to Stop Seawater Intrusion	45,000	21,000
Sustainable Yield	24,000	**48,000**[b]

[a] The proposed action would eliminate pumping in areas adjacent to the coast rather than reduce pumping throughout the Basin.

[b] Conjunctive use of the groundwater basin, necessitated by wet year/dry year fluctuations in the supplemental supply, reduces the estimated sustainable yield to 47,000 AFY.

[CCC Staff Note: The figures presented in Table 1.2 have been supplied by PVWMA and are for the most part estimates. While the Commission may come to a different numerical conclusion about overdraft and acceptable withdrawal were it to undertake more rigorous examination of the data, assumptions, and methodology that PVWMA used, the Commission believes that the numbers do appropriately demonstrate a general magnitude of the groundwater problem in the area that needs to be addressed.]

In 1993 PVWMA adopted its first Basin Management Plan (developed in concert with the Bureau of Reclamation), identifying a preferred water supply alternative for meeting supply needs, which called for bringing out-of-basin CVP water through an import pipeline and enhancing use of local surface water supplies as key water sources. The basic concept was to manage the basin by decreasing pumping during wet years and relying on banked groundwater in dry years. Other components of the 1993 Basin Management Plan (BMP) included conservation programs, an irrigation distribution system, and, to the extent feasible, use of local recycled water.

PVWMA has initiated the first phase of the proposed water supply program, which includes the construction of facilities to use local surface water supplies available from Harkins Slough and the construction and operation of pipelines, pumping, treatment, and diversion facilities for this supply. PVWMA deferred evaluation of an important part of its Revised BMP, the importation of surface water into the valley and construction of an import pipeline, pending completion of the updated BMP (the Revised BMP). In 2000, PVWMA initiated the Revised

BMP, which built on strategies from the 1993 BMP. PVWMA then selected a preferred strategy, held a series of public workshops, published an EIR and adopted the proposed recommended alternative (Revised BMP, February 2002).

C. <u>Procedures - Phased Review</u>. The project is located within and outside the coastal zone. The Commission's review of this project involves both federal consistency review under the federal Coastal Zone Management Act, and coastal development permitting (and possible appeals) under the state Coastal Act. The federal consistency procedures are triggered because the project requires a federal (U.S. Army Corps of Engineers "Section 404") permit. It also involves federal Bureau of Reclamation approvals, as well as federal funding for some components. One of the features of federal consistency review is "phased review" when projects are planned and conducted in phases.

Project phases are proposed as follows:

EIS TABLE 1.3
PVWMA WATER SUPPLY PROJECT

Project	**Status**
<u>Phase 1</u>	
▪ Coastal Distribution System (Harkins Slough portion only)	In operation
▪ Coastal Distribution System (Accelerated Pipeline Project)	Currently underway; completion in 2003
▪ Conservation: (5,000 afy)	Currently underway; full implementation in 2010
▪ Harkins Slough with Harkins Slough Recharge Basin, Supplemental Wells, and Connections (1,100 afy)	In operation
<u>Phase 2 – 2004-2007</u>	
▪ Remaining portions of the Integrated Coastal Distribution System (ICDS)	Evaluated in this EIS
▪ Import Water Project with Out-of-Basin Banking (13,400 afy) and Supplemental Wells	Evaluated in this EIS
▪ Water Recycling Project (4,000 afy)	Evaluated in this EIS
▪ Watershed Management Programs (e.g., nitrate management)	To be developed
<u>Phase 3 – After 2007 (Potential Future Projects</u>***)***	
▪ Wells for conjunctive use of CVP water ▪ Inland Distribution System ▪ College Lake (storage project) ▪ Watsonville Slough (local surface water diversion project) ▪ Murphy Crossing (local surface water diversion project)	Need for and selection of Phase 3 projects to be implemented will be determined after 2007, based on future water supply and demand conditions. Not addressed in this EIS; additional environmental review will be required.

The portions of the project within the coastal zone, primarily the coastal distribution system, are split between Monterey and Santa Cruz Counties, where coastal development permits (which are appealable to the Commission) are required. Santa Cruz County has issued a coastal development permit (No. 04-0258) for its portion of the Harkins Slough and coastal distribution system (that County permit was not appealed). Monterey County is currently processing a coastal development permit for its portion of the project (the coastal distribution system and the import pipeline within the coastal zone). In addition, a Coastal Commission (original/retained jurisdiction) coastal development permit is needed for a short stretch of the import pipeline where it crosses the Pajaro River. That permit application has been submitted to (but not 'filed' by) the Commission staff; Commission review is likely within the next few months. Less further along in the permitting process is the recycled water facility, which would need a coastal development permit from Santa Cruz County (and which would be appealable to the Commission). The subject federal consistency review does not eliminate the need for any coastal development permits for any construction activities within the coastal zone.

Project phases are shown in the table above. Both because of the phased planning and implementation, as well as the future Commission review opportunities afforded by a Commission-issued permit and potential appeals of County-issued permits for those portions of the project within the zone, the Commission typically treats these types of situations as somewhat conceptual in nature. At the same time the broader scope of federal consistency encompasses a greater geographic scope. Typically, when the Commission has conducted a "conceptual" review at an early phase of an overall development process, it has not necessarily required all final project details; rather the Commission seeks to evaluate proposals in as much detail as is available at the time of the review. The Commission has historically conducted these types of phased reviews for public works projects (e.g., Caltrans Devil's Slide Tunnel and Hatton Canyon projects; Santa Barbara and Los Angeles Airport Improvements) where decisions to implement the activities were being made in phases.

When the Commission has reviewed these types of phased activities, the Commission has historically reviewed plans and activities at a general level, noting potential problem areas, issues that may need to be more thoroughly addressed at future implementation stages, and/or identifying future activities which would be likely to affect the coastal zone if implemented, to the degree possible given the information provided. The benefits of this type of phased review are several, including that: (1) it provides the federal permitting or funding agency (or the federal agency, when it is the applicant), in advance of specific project or plan implementation, notice of what issues are likely to arise and what alternatives or mitigation measures may need further examination in future reviews; and (2) it provides the Commission with an overall planning context within which to review specific plans or projects subsequently proposed. Thus, the Commission tends to engage in a broader planning scope of analysis, in part to provide applicants with advanced awareness of concerns likely to arise in connection with future implementation actions.

With this context, the Commission's primary concern is determining whether the fundamental concept, goals and objectives of the project, and in particular the currently-proposed Phase 2 of the project, which presents the crux of the water supply program (i.e., the water importation component), are consistent with the applicable California Coastal Management Program (CCMP)/Coastal Act policies. Further permit/appeal phases can assure, for example, whether the proposed Pajaro River crossing includes all the specific designs, alternatives, and mitigation measures needed to protect coastal zone resources, or whether the proposed water recycling project (which has not been fully designed but is likely to displace prime agricultural lands) has minimized or mitigated impacts to coastal resources. The same holds true for future phases or activities outside the coastal zone, where the opportunities will exist for conducting federal consistency reviews for activities affecting coastal resources.

Thus, for some portions of the project the consistency certification submitted contains only a conceptual plan and conceptual mitigation measures. To the extent mitigation measures have been committed to and described, as discussed in the findings below, the Commission is able to make an overall determination as to whether the project is consistent with the applicable CCMP/Coastal Act policies. Detailed design will follow and partially (i.e., within the coastal zone) be the subject of subsequent coastal development permit applications submitted by PVWMA. In addition, as discussed on page 2-3, 29-30, and in Exhibit 20, PVWMA has committed to submitting and coordinating further design plans, annual monitoring, and future project changes to the Commission staff for review, for all components which would affect the coastal zone.

Moreover, any changes to the project design or mitigation commitments raising Coastal Act policy concerns could independently trigger additional federal consistency review under the provisions of Section 930.66(b) (and/or, if any federal funding is involved, Section 930.100(b)) of the federal consistency regulations (15 CFR Part 930), which provide for reopening of consistency based on "changed circumstances" of federally permitted and federally funded activities with which the Commission has previously concurred (i.e., based on a determination that the project is having coastal zone effects that are substantially different than originally proposed and, as a result, the project is no longer consistent with the applicable CCMP/Coastal Act policies). Section 930.66(b) provides:

> ***§930.66 Supplemental coordination for proposed activities***
>
> *(a) For federal license or permit proposed activities that were previously determined by the State agency to be consistent with the management program, but which have not yet begun, applicants shall further coordinate with the State agency and prepare a supplemental consistency certification if the proposed activity will affect any coastal use or resource substantially different than originally described. Substantially different coastal effects are reasonably foreseeable if: (1) The applicant makes substantial changes in the proposed activity that are relevant to management program*

enforceable policies; or (2) There are significant new circumstances or information relevant to the proposed activity and the proposed activity's effect on any coastal use or resource.

D. Status of Local Coastal Program. The standard of review for federal consistency determinations is the policies of Chapter 3 of the Coastal Act, and not the Local Coastal Program (LCP) of the affected area. If an LCP that the Commission has certified and incorporated into the California Coastal Management Program (CCMP) provides development standards that are applicable to the project site, the LCP can provide guidance in applying Chapter 3 policies in light of local circumstances. If the Commission has not incorporated the LCP into the CCMP, it cannot guide the Commission's decision, but it can provide background information. The Commission has certified Santa Cruz County's LCP but has not incorporated it into the CCMP. The Commission has certified Monterey County's LCP and partially incorporated it into the CCMP.

E. Applicant's Consistency Certification. The Pajaro Valley Water Management Agency certifies the proposed activity complies with the federally approved California Coastal Management Program and will be conducted in a manner consistent with such program.

F. Staff Recommendation and Motion. The staff recommends that the Commission adopt the following motion:

MOTION. I move that the Commission conditionally concur with the Pajaro Valley Water Management Agency's consistency certification.

The staff recommends a **YES** vote on this motion. A majority vote in the affirmative will result in adoption of the following resolution:

Conditional Concurrence

The Commission hereby **conditionally concurs** with the consistency certification made by the Pajaro Valley Water Management Agency for the proposed project, finding that, as conditioned, the project is consistent with the California Coastal Management Program.

Condition

1. Water Use Restriction. Except as may otherwise be authorized by the Coastal Commission in future reviews of proposed project changes, and except for those lands with the Aromas County Water District outside of the coastal zone, the Pajaro Valley Water Import/Distribution Project shall be limited to the supply and distribution of non-potable water within those portions of the PVWMA District in the coastal zone, as delineated as of February 17, 2005, for the purposes of supporting agricultural land uses and groundwater management (i.e., addressing basin overdraft and seawater intrusion), except that in no case shall water be used to support expansions of the agricultural operations into areas where such expansion

would result in adverse biological and other environmental effects, such as the conversion of environmentally constrained (i.e., by the presence of, and/or setbacks associated with, wetlands, sloughs, other sensitive habitats, steep slopes, significant trees, etc.) and/or undeveloped native land to agricultural production.

Right of Appeal (in the event the conditional concurrence is treated as an objection):

If PVWMA does not agree to the condition, 15 CFR Section 930.4 provides that PVWMA shall treat the conditioned concurrence as an objection, and within 30 days from receipt of notice of the Commission's action, pursuant to 15 CFR Part 930, Subpart H, PVWMA may request that the Secretary of Commerce override this objection. In order to grant an override request, the Secretary must find that the activity is consistent with the objectives or purposes of the Coastal Zone Management Act, or is necessary in the interest of national security. A copy of the request and supporting information must be sent to the California Coastal Commission and the U.S. Army Corps of Engineers. The Secretary may collect fees from PVWMA for administering and processing its request.

The federal consistency regulations also require the applicant to immediately notify the State agency if the State agency's conditions are not acceptable (see 15 CFR Section 930.4(a)(2)).

II. Findings and Declarations.

The Commission finds and declares as follows:

A. Agriculture/Groundwater. Section 30241 of the Coastal Act provides for maintaining the maximum amount of prime agricultural land in production. This Section also requires that public service expansions and assessments for services avoid reducing agricultural viability. Section 30242 adds protection for non-prime agricultural lands. Section 30222 expresses the importance of agriculture as a priority use under the Coastal Act. Section 30231 provides for the protection of water quality through, among other means, protecting ground water basins. These Sections provide:

> ***Section 30241.*** *The maximum amount of prime agricultural land shall be maintained in agricultural production to assure the protection of the areas, agricultural economy, and conflicts shall be minimized between agricultural and urban land uses through all of the following:*
>
> *(a) By establishing stable boundaries separating urban and rural areas, including, where necessary, clearly defined buffer areas to minimize conflicts between agricultural and urban land uses.*
>
> *(b) By limiting conversions of agricultural lands around the periphery of urban areas to the lands where the viability of existing agricultural use is already severely*

limited by conflicts with urban uses or where the conversion of the lands would complete a logical and viable neighborhood and contribute to the establishment of a stable limit to urban development.

(c) By permitting the conversion of agricultural land surrounded by urban uses where the conversion of the land would be consistent with Section 30250.

(d) By developing available lands not suited for agriculture prior to the conversion of agricultural lands.

(e) By assuring that public service and facility expansions and nonagricultural development do not impair agricultural viability, either through increased assessment costs or degraded air and water quality.

(f) By assuring that all divisions of prime agricultural lands, except those conversions approved pursuant to subdivision (b), and all development adjacent to prime agricultural lands shall not diminish the productivity of such prime agricultural lands.

Section 30242. *All other lands suitable for agricultural use shall not be converted to nonagricultural uses unless (l) continued or renewed agricultural use is not feasible, or (2) such conversion would preserve prime agricultural land or concentrate development consistent with Section 30250. Any such permitted conversion shall be compatible with continued agricultural use on surrounding lands.*

Section 30222*. The use of private lands suitable for visitor-serving commercial recreational facilities designed to enhance public opportunities for coastal recreation shall have priority over private residential, general industrial, or general commercial development, but not over agriculture or coastal-dependent industry.*

Section 30231. *The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, … preventing depletion of ground water supplies….*

Corresponding fairly closely to topographic and hydrologic (and topographic) features, the PVWMA service area encompasses approximately 79,600 acres of irrigated agricultural lands, native and nonirrigated lands in the hillside areas, the City of Watsonville, and the unincorporated communities of Pajaro, Freedom, Corralitos, and Aromas (Exhibit 2). The geographic boundaries of the agency approximately correspond to the topographic and hydrologic boundaries of the valley. Agriculture is by far the predominant economic industry in the Valley, which contains a population of over 80,000 residents. The main urban concentration is in the City of Watsonville, the urbanized portion of which is mostly located inland of the

coastal zone boundary, which is generally along Highway 1 in the Valley (except where the boundary moves further inland, near Elkhorn Slough) (Exhibit 21, p.2).

With over 30,000 acres of productive land in cultivation (specifically, 30,349 acres within the PVWMA service area), the Pajaro Valley is a rich agricultural region, earning over half a billion dollars/year (Exhibits 12-14). Fruits and berries account for approximately half of the total production value in the Valley, with strawberries accounting for approximately 80 percent of this category. Vegetable crops (primarily mushrooms and lettuce) account for about a third of total production, while greenhouse and field ornamentals account for most of the remainder.

Almost all (over 95%) of the water users in the Valley rely on the existing groundwater basin for their water supply. Due to extensive primarily agricultural pumping since the 1940s, overdraft conditions have caused groundwater levels to drop below sea level, creating a landward pressure gradient that causes seawater to move inland, where it mixes with fresh water. Over the past 25 years, PVWMA estimates over 150,000 acre-feet (AF) of mixed fresh and seawater have migrated inland across the coast, resulting in seawater replacing freshwater in the aquifer. Seawater intrusion increasingly is degrading water quality, and limiting the utility of groundwater for agricultural and domestic purposes. PVWMA's investigations indicate that the majority of seawater intrusion in the region is occurring in two aquifers associated with alluvium formation gravels in the interval between 100 and 200 feet below sea level, and within the Aromas sands in the 300- to 600-foot interval. While the adverse effects associated with seawater intrusion are most noticeable in the coastal portion of the basin, pumping throughout the entire basin has an effect on seawater intrusion. PVWMA has studied whether more aggressive water conservation could halt this trend and has established that it could not. (Strawberry producers in Pajaro Valley (like the rest of Monterey County's berry production) already almost exclusively use drip irrigation, and conservation could only save 4000-5000 AFY.) PVWMA therefore states that groundwater overdraft "…conditions are not expected to improve without the elimination of groundwater pumping for agricultural uses in areas adjacent to the coast and development and delivery of additional water supplies to agricultural users."

The proposed project is designed to prevent further overdraft of the groundwater basin and to halt seawater intrusion by providing quality water for the long-term sustainability of agricultural irrigation and production.

According PVWMA's Basin Management Plan, current agricultural water demand in the PVWMA is 59,300 AFY. Exhibit 8 (EIS Figure 1.3) shows the historic groundwater pumping patterns in the Valley, overlain by the sustainable groundwater supply (24,000 AFY). Demand, which PVWMA estimates is currently approximately 70,000 AFY, clearly far exceeds the sustainable yield,[6] as is the case for every year depicted in Exhibit 8 (Figure 1.3). PVWMA estimates conservation measures could only realistically reduce groundwater demand by 5,000 AFY. The difference between total groundwater demand (69,000 AFY) and a basin sustainable yield of 48,000 AFY is 16,000 AFY. Groundwater modeling results indicate that PVWMA

[6] See staff note regarding "sustainability" on page 13.

needs to supply a total of 18,500 AFY to the coastal area in order to create a hydrostatic barrier to prevent further seawater intrusion into the groundwater basin while also meeting near-term (2007) demand.

Table 1.1 below shows existing and projected future water use in the PVWMA service area. Total current water use is approximately 71,500 AFY. Groundwater pumping provides over 95 percent of this current demand, or an estimated 69,000 AFY. Approximately 2,100 AFY from local surface water diversions are used (Watsonville diverts approximately 1,100 AFY from Corralitos Creek, and agricultural users are projected to divert another 1,000 AFY from local surface waters). PVWMA projects a 9,000 AFY increase in water demand by 2040. Urban demand represents about 3,900 AFY of the projected increase, while agricultural demand represents about 5,100 AFY of the increase. According to PVWMA's Water Conservation 2000 report, water conservation by PVWMA (for agricultural uses) and the City of Watsonville (for urban uses) is expected to reduce demand by approximately 5,000 AFY.

TABLE 1.1

EXISTING AND FUTURE WATER USE WITHIN PVWMA AREA

	Current (2001) Conditi(**(AFY)[a]**	**Future (2040) Conditions (AFY)[a]**
Demand[b]		
Agricultural Uses	59,300	64,400
Urban Uses	12,200	16,100
Total Demand Before Additional Conservation	**71,500**	**80,500**
Conservation		
Increased Agricultural Conservation (To be achieved by 2010)	4,500	4,500
Increased Urban Conservation (To be achieved by 2010)	500	500
Total Additional Conservation	**5,000**	**5,000**
Project Total Demand with Additional Conservation	**66,500**	**75,500**

[a] Values rounded to the nearest hundred to represent the values' significant accuracy.
[b] Current demand is based on current pumping (estimated at about 69,000 AFY) and surface water diversions.

SOURCE: RMC, Inc., 2002

PVWMA also notes that:

> *„… under current pumping practices, a 65 percent reduction in basinwide groundwater pumping (45,000 AFY) is necessary to eliminate seawater intrusion. Under this scenario,*

> *the sustainable yield of the groundwater basin is approximately 24,000 AFY (69,000 AFY minus 45,000 AFY), or approximately one third of the current average annual demand on groundwater supplies (refer to Table 1.2* [see page 13]*). However, the basin sustainable yield could be doubled if pumping in the areas adjacent to the coast were eliminated and replaced by an alternative supply. The basin sustainable yield estimated for this scenario is 48,000 AFY. The modeling indicates that elimination of groundwater pumping in the coastal area would allow groundwater levels in the area to increase, thereby creating a hydrostatic barrier that would prevent further seawater intrusion. This scenario requires a firm (100 percent reliable) supplemental water supply with very little variation in year-to-year availability and construction of a coastal distribution system to provide coastal agricultural users with water.* [Emphasis added].

PVWMA has the authority to meter, restrict, and charge fees for all but the smallest wells in the Valley. PVWMA requires meters on all water extraction facilities pumping more than 10 AFY, with approximately 800 extraction facilities currently metered. PVWMA currently charges $80 per AF and estimates that growers incur an average additional utility cost of approximately $40/AF. Therefore, currently the average groundwater cost is $120/AF (not including irrigation well costs). Shutting down wells, an alternative to importing water, would take extensive lands out of production. PVWMA states:

> ***EFFECTS ON AGRICULTURAL PRODUCTION***
>
> *Basinwide groundwater pumping restrictions necessary to curtail all seawater intrusion would reduce the total annual agricultural water supply from 59,300 af to 12,200 af. It is estimated that the groundwater restrictions would result in approximately 25,660 acres of lost agricultural production with an annual value of $372 million. This would result in significant long-term adverse impacts throughout the agricultural community.*

PVWMA further estimates that approximately 2,200 acres of agricultural land would need to be fallowed if no new supplies are developed, and that additional acreage would need to be fallowed in the future.

The proposed water importation and distribution system would result in some impacts to some existing agricultural operations; however these impacts would be relatively minor, especially when compared to the severe loss that fallowing land or allowing continually increasing salt water intrusion to occur. The more minor impacts include temporary impacts from construction activities to build the water systems, increased costs to farmers of imported water, and the possible direct loss of 8.5 acres of prime agricultural land for the proposed water recycling facility. Aside from this last effect, PVWMA states:

> *The proposed Import Pipeline and Coastal Distribution System would not result in a loss of agricultural land because such facilities would be located underground and farming as currently occurs would resume within the construction corridor following pipeline construction.*

Concerning the possible removal of approximately 8.5 acres of prime agricultural land for the water recycling project, PVWMA analyzed alternatives and believe there is no feasible less damaging alternative for on-site expansion of the Watsonville Wastewater Treatment Facility. PVWMA has also committed to mitigating this loss. PVWMA states:

> *Construction of the proposed Recycled Water Facility at the Watsonville Wastewater Treatment Facility (WWTF) and booster pumping plants associated with the ICDS would result in the conversion of approximately 9 acres of Prime Farmland within the coastal zone from agricultural use to water treatment and storage facilities, thereby precluding farming on the project site. Because all surrounding lands are considered Prime Farmland, no feasible alternative site is available that would reduce or avoid the conversion of Prime Farmland. Development of the site would therefore contribute to the cumulative loss of Prime Farmland in the region, and is considered a significant impact.*

PVWMA examined on- and off-site alternatives in its EIR/EIS, including one alternative which would have taken 19 acres of prime agricultural land. PVWMA states:

> *The DEIR considered two alternative sizes for the Recycled Water Facility (RWF): the Local-Only Alternative (capable of producing 7,700 AFY of recycled water and requiring 19 acres for facility development), and the BMP 2000 Alternative (capable of producing 4,000 AFY of recycled water and requiring 8.5 acres for site development). At its meeting on December 5, 2001, the PVWMA Board of Directors rejected the version of the Recycled Water Facility requiring 19 acres of prime farmland in favor of the version requiring 8.5 acres of prime farmland (refer to Introduction for more information.*
>
> *… The proposed site is a combination of small portions of adjacent parcels, so as not to precipitate conversion of the remaining portions of the adjacent parcels. In addition, the proposed site layout was designed to use space efficiently ….*
>
> *… Project engineers (RMC Engineers, Inc.) determined that a remote location for the RWF, while technically feasible, is inconsistent with BMP objectives, substantially increasing the cost of this project, for the following reasons:*
>
> - *Any relocation of the RWF to a location not connected to the existing treatment facility will require construction of processes or facilities not originally conceived during the conceptual design. These facilities include new utilities such as power, sewer, pumping and conveyance facilities between the existing and new treatment facilities.*
> - *The amount of land required for the RWF would increase, due to the inability of the RWF to utilize existing WWTF processes, parking, office, utilities and other functions.*

- *A new pump station and associated conveyance pipelines would be required to convey secondary effluent from the WWTF to the RWF.*
- *Sludge produced at the RWF would either have to be trucked to the existing WWTF for processing, or additional sludge handling facilities would need to be constructed at the RWF.*
- *Significant upgrades of local electrical, gas, water and sewer pipelines would likely be required.*
- *No other sites were identified for the RWF without relocating existing businesses or impacting agricultural uses or significantly impacting slough or wildlife habitat. (Other sites that were investigated are listed below.)*
- *Additional employees would be required to staff the RWF, who would have to coordinate RWF operations closely with the WWTF.*

In addition, PVWMA proposes mitigation for this impact of this loss of agricultural land, in the form of improving currently unfarmed land and returning it to production. The Final EIS provides:

> *Measure 4.A.1-2: In order to compensate for the loss of prime agricultural land, PVWMA will cause up to 8.5 acres of prime agricultural land that is no longer farmed to be restored or otherwise brought back into production. This can be accomplished through contribution to a fund dedicated to the restoration of agricultural land.*
>
> *1) Identify 8.5 acres of prime agricultural land that is no longer farmed and return it to production, or alternatively, contribute to a fund dedicated to the restoration of agricultural land. Submit documentation of agricultural land restoration or appropriate contribution to the project file and the Santa Cruz County Planning Department.*

The WWTF is not as far along in the permitting process as some of the other project components. As discussed on pages 14-17 (phased review discussion), this project component will need Santa Cruz County and City of Watsonville coastal development permits, which would be appealable to the Commission. Given the information available, it appears likely that consolidating this facility with the existing treatment plant would seem logical from a resource protection perspective. However the Commission will need further details before it can assure that it has been designed to minimize impacts to the maximum extent feasible, that there is no less damaging alternative, and that the impact can be mitigated in an appropriate manner not causing additional coastal zone effects (e.g., converting sensitive habitat lands to agricultural production). The Commission therefore finds this component, but not necessarily the design or location, conceptually consistent with the agricultural protection policies, noting it will have the opportunity for future review as discussed on pages 14-17.

Concerning higher water costs to growers, PVWMA states:

> ***REDUCTION IN NET RETURNS DUE TO HIGHER WATER COSTS***
>
> *Increased water augmentation charges are required to support the costs of the project and will increase Pajaro Valley growers' crop production costs and lower the net returns per unit of production. This could result in some significant adverse economic impacts on small, economically marginal farming operations that are growing low value crops in the area. However, increased water conservation and better management practices (including crop substitution) could mitigate these impacts. If the current farming operators are unable to absorb and/or adapt to the reduction in their net returns then market forces will likely reduce land rents to offset impacts to net returns.*
>
> *Although the increase to production costs for the higher value crop rotations would be relatively small (i.e., 1.8 percent to 2.1 percent for delivered water users and 0.7 percent to 0.8 percent for groundwater users), due to the narrow profit margins for agricultural production the impacts on net returns would be significant. It is estimated that the projected $510 increase in water costs for strawberry growers using delivered water could cause growers to experience as much as a 10.9 percent decrease in their net returns. For growers of lower value crops the decrease will be even greater, likely making production of crops such as broccoli no longer financially viable. However, these impacts represent conservative estimates since increased water conservation methods and better management practices (described in Appendix B) could reduce the magnitude of these impacts. Furthermore, the gradual and predictable implementation of the cost increases will also facilitate and enhance growers' abilities to adapt their production accordingly. In addition, there may be positive production benefits for delivered water users associated with longterm reliability. In any case, if growers are unable to make adequate net returns then there will be market pressure for landowners to reduce lease rates.*
>
> *These impacts are all minor compared to those that would occur under the Alternative A – No Action, which would likely result in reducing agricultural production to only approximately 4,700 acres, a decrease of almost approximately 85 percent. Under Alternative B, no agricultural production would necessarily be lost since the lands agricultural long term viability would be maintained by the provision of the supplemental water supply.*

Finally, PVWMA has looked at water conservation as alternative to importing water. PVWMA states:

> *AGRICULTURAL WATER CONSERVATION*
>
> *The proposed agricultural water conservation program is intended to improve irrigation efficiency in the Pajaro Valley. Data from mobile lab evaluations conducted from 1990 to 1994 and 1999 to 2001 indicate that irrigation efficiency seems to vary considerably. Properly designed, maintained, and managed irrigation systems have inherent maximum ranges of achievable irrigation efficiencies.*
>
> *In 2000, PVWMA instituted a requirement that all growers annually submit plans summarizing irrigation and conservation practices. The program will help the agency track implementation of the water conservation program. As the program gains acceptance among Pajaro Valley growers, observed irrigation efficiencies are assumed to move toward these achievable ranges, although irrigation efficiency can vary considerably among different irrigation events. Assuming all growers participate in the program, the agricultural water conservation program could result in agricultural water savings averaging approximately 4,500 afy.*

PVWMA concludes that:

> *…despite the loss of approximately 9 acres of prime farmland within the coastal zone, the project is consistent with the California Coastal Act policies to maintain the maximum amount of prime agricultural land in agricultural production by enhancing the future viability of agricultural production in the Pajaro Valley.*

In analyzing this proposal, the Commission notes that the Pajaro Valley is one of the preeminent agricultural regions in the state's coastal zone, and that Coastal Act policies urge the protection and maintenance of agricultural viability and the prevention of degradation of groundwater basins. The Commission agrees with PVWMA that the project's primary goals, promoting agricultural viability and preventing saltwater intrusion, are consistent with the Coastal Act priorities articulated in the agricultural protection policies (Sections 30241 and 30242) and the water quality policy (Section 30231 – prevent depletion of ground water supplies). The Commission's primary concern is that by attempting to protect agriculture through importing water, PVWMA could be eliminating a primary constraint to growth of lower priority, non-agricultural, urban-type uses, which could ultimately threaten agricultural viability, and, further, that even if limited to agricultural uses, the additional water could be used to expand agriculture into sensitive habitat areas not now in production (which is addressed in the final section of this report). The Commission believes that an additional condition is necessary in order to protect agricultural uses and sensitive resources, and to bring the project into conformance with the agricultural protection policies of the Coastal Act. This condition (see page 4) would clarify and require that absent further approval by the Coastal

Commission, imported water from this project will not be used to serve, within the coastal zone or in a manner affecting the coastal zone: (1) land uses other than agricultural; (2) lands other than those already in agricultural production; or (3) expansions of the agricultural operations into areas where such expansion would result in adverse environmental effects, such as the conversion of environmentally sensitive areas and/or undeveloped 'native' lands that might affect biological resources. As conditioned (see page 4), and with the EIS mitigation measures (Exhibit 17) and PVWMA's agreement (Exhibit 20), the Commission finds that sufficient protective mechanisms would be in place to assure that neither of these scenarios will occur. Thus, concerning agricultural viability, the Commission concludes that the project would, as conditioned: (1) be consistent with Sections 30222 and 30241-30242 of the Coastal Act, because it recognizes the priority for agriculture and would maintain the maximum amount of prime agricultural land in production; (2) be consistent with the test of Section 30241 which requires that public service expansions and assessments for services avoid reducing agricultural viability, because the pumping costs and water cost assessments have been carefully tailored to be realistically affordable to growers; and (3) be consistent with Section 30231, which protects ground water quality, by offering a solution to halt salt water intrusion into the basin.

B. Public Works/Concentration of Development/Growth Inducement. Section 30250(a) of the Coastal Act provides for the concentration of new development within existing developed areas, areas able to accommodate it, or where adequate public services exist and the development would not cause adverse effects on coastal resources. Section 30254 provides for the planning and design of public works projects in a manner that would protect coastal resources, as well as reservation of scarce public services to priority uses under the Coastal Act. These Sections provide:

> ***Section 30250(a).*** *New residential, commercial, or industrial development, except as otherwise provided in this division, shall be located within, contiguous with, or in close proximity to, existing developed areas able to accommodate it or, where such areas are not able to accommodate it, in other areas with adequate public services and where it will not have significant adverse effects, either individually or cumulatively, on coastal resources. In addition, land divisions, other than leases for agricultural uses, outside existing developed areas shall be permitted only where 50 percent of the usable parcels in the area have been developed and the created parcels would be no smaller than the average size of surrounding parcels.*
>
> ***Section 30254.*** *New or expanded public works facilities shall be designed and limited to accommodate needs generated by development or uses permitted consistent with the provisions of this division; provided, however, that it is the intent of the Legislature that State Highway Route 1 in rural areas of the coastal zone remain a scenic two-lane road. Special districts shall not be formed or expanded except where assessment for, and provision of, the service would not induce new development inconsistent with this division. Where existing or planned public works facilities can accommodate only a limited amount of new development, services to coastal dependent land use, essential public services and basic industries vital to the economic health of the region, state, or*

nation, public recreation, commercial recreation, and visitor-serving land uses shall not be precluded by other development.

The major issue raised by this project is the concern that, in importing major new water supplies to an area where water limits currently acts as a constraint to growth, the project could induce growth and urban development in a manner which could harm rather than promote agricultural viability, as well as lead to a myriad of other adverse effects on coastal resources that increased growth could bring. PVWMA acknowledges the legitimacy of the concern; however it believes such concerns are adequately addressed through its underlying enabling legislation, which provides that "…no water shall be imported into the agency for other than agricultural purposes …," combined with the fact that the water would not be treated to potable standards. PVWMA thus believes that, for both legal and practical purposes, the water would be limited to serving existing agricultural operations. PVWMA also believes it is the role of other planning and regulatory agencies to address this concern, stating that: "It is important to note that PVWMA does not have the authority or jurisdiction to make land use and development decisions, nor to implement the measures necessary to mitigate the effects of that growth."

Addressing the growth and public services issues, the project EIS states:

SECONDARY EFFECTS OF GROWTH

Implementation of the BMP Project (either alternative) would reduce a constraint to growth: groundwater supply reliability. The project could accommodate an amount of growth that is consistent with regional growth projections, but that could indirectly result in potentially significant secondary effects of growth. Some of these secondary effects of growth could be significant and unavoidable, while others are significant but mitigable. Significant unavoidable impacts that could occur as a result of planned growth include: loss of agricultural land and open space, increase demand on groundwater resources, and changes in visual character.

PVWMA does not have the authority to make land use and development decisions. It does not approve growth but does have a responsibility to manage and protect the groundwater resources in the service area. PVWMA does have the ability and responsibility to mitigate the impacts of growth on groundwater resources by implementing management actions that keep the basin in balance and prevent/reduce salt water intrusion. Implementation of the BMP 2000 program will serve to mitigate the secondary effects of planned growth on the groundwater resources.

Authority to implement such measures rests with the land use jurisdictions – City of Watsonville, Monterey County, Santa Cruz County, and San Benito County – which enforce local, state, and federal regulations and mitigation requirements through the development approval and permit process. Through the CEQA

> *process and the development permit process, these local land use agencies impose mitigation requirements on development projects to address the secondary effects of growth and identify measures that must be implemented by other agencies, such as the Regional Water Quality Control Board, the California Department of Fish and Game, and Air Quality District, among others. PVWMA finds that mitigation of the secondary effects of growth is primarily within the authority and jurisdiction of other public agencies and looks to those agencies to implement such measures as appropriate and consistent with their authorities.*

Despite these statements, the Commission is greatly concerned that intense pressures to use the imported new water for non-priority uses will remain. PVWMA has accounted for future planned urban uses in its demand forecasts, in order to determine the amount of water necessary to address the saltwater intrusion problem; nevertheless PVMWA is not proposing to treat water to potable standards or to serve areas not currently in agricultural production. Approximately 36% of the 96,500 acre Valley is currently in agricultural production, with 13% urban/suburban and 51% native vegetation and undeveloped land (Exhibit 6). Clearly, without controls, importing major new water supplies could induce extensive new development resulting in significant adverse effects, both inside and outside the coastal zone. Also, just as clearly, future pressures will be brought to bear, as they have begun to do already, to expand the scope of the water import and supply program to non-agricultural activities. The fact that an exception to the "only-agricultural use" policy has already been carved out for the Aromas County Water District[7] only highlights this concern. Existing regulatory and planning controls, over which the Commission may have limited or no control, may or may not be able to withstand such pressures.

In essence, PVWMA is relying on existing (and future) land use regulatory controls to assure the water is used for the intended purposes, which if that remains the case, would be consistent with Coastal Act policies. The issue before the Commission is not the appropriateness of the project, as without imported water agricultural viability will be seriously undermined by continuing and increasing groundwater withdrawals. The issue instead is whether additional commitments can be provided to assure, or at least maximize, that the water will in fact be used for the intended purposes, and, further that "agricultural purposes" be appropriately defined such that it is not so open-ended to provide loopholes for non-agricultural uses.

Accordingly, the Commission staff has been working with PVWMA on an agreement that would address these Coastal Act issues and help offset concerns about non-agricultural use of the water. To date, PVWMA has:

1. Reiterated PVWMA's enabling legislation (Statues of 1984, Chapter 257) prohibits the use of water for other than agricultural purposes.[8]

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7 An exception built into PVWMA's enabling legislation does not limit water delivered to the Aromas County Water District to solely agricultural purposes; however, that area is predominantly outside the coastal zone.

8 With the exception noted in the previous footnote for the Aromas County Water District (although PVWMA is not

2. Agreed that agricultural uses shall be as defined in the definition chapters of the Santa Cruz and Monterey County LCPs, "with the understanding that a number of the uses potentially allowable in areas zoned for Agriculture under these LCPs would not be eligible for imported water from this project (such as residential, municipal/ or industrial uses)."
3. Agreed that the water "is intended to serve areas already in agricultural production, and the project would not require nor result in direct land use changes with associated significant environmental effects, such as the conversion of environmentally constrained (i.e., by the presence of, and/or setbacks associated with, wetlands, sloughs, other sensitive habitats, steep slopes, significant trees, etc.) and/or undeveloped, 'native' lands that might affect biological resources."
4. Recognized that the entire project is subject to the federal consistency provisions under the Coastal Zone Management Act, and, further that any additions or changes to the project that would affect its consistency with the California Coastal Management Plan will be subject to the 'reopener' procedures contained in 15 CFR Part 930, Section 930.66.
5. Agreed to submit project plans to the Commission staff for review, including showing user connection points, and has agreed to submit any substantial changes to the plans.
6. Agreed to submit annual monitoring reports to the Commission staff for review, which will include available data regarding: the volume and type of water inputs in the Project, including the amount of water supplied from import (Central Valley Project or otherwise), groundwater pumping, and other sources (e.g., Harkins Slough project, Recycled Water Facility, other); any treatment applied to Project water; Project water use; significant changes in cropping**;** changes in saltwater intrusion and any substantial Project changes in the preceding year. The submittal shall include a report on PVWMA's conservation programs in a format consistent with USBR requirements, and the latest version of the map depicting the postulated extent of the seawater-intruded zone (based on coastal wells with elevated chloride levels).
7. Agreed that: (i) any substantial changes to Project components within or affecting the coastal zone will be subject to the above project clarifications and commitments; (ii) PVWMA will incorporate these project clarifications and commitments as legally enforceable components of the project description for any such change; and (iii) any changes to these project clarifications and commitments will not be effective without the written approval of the Commission staff. [see Exhibit 20 for the specific language of the agreement, which also includes discussion of what PVWMA considers would constitute a substantial deviation or modification.]

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treating that water either to potable standards).

While these agreements go a long way towards addressing the project's Coastal Act concerns, additional language is needed to strengthen the land and water use restrictions and thereby assure the project will avoid inducing non-agricultural development and increased agricultural development on lands not currently in production. In order to bring the project into conformance with the applicable Coastal Act policies, a condition is necessary (see page 4) to clarify and require that, absent further approval by the Coastal Commission, imported water from this project will not be used to serve, within the coastal zone or in a manner affecting the coastal: (1) land uses other than agricultural; (2) lands other than those already in agricultural production; or (3) expansions of the agricultural operations into areas where such expansion would result in adverse environmental effects, such as the conversion of environmentally sensitive areas and/or undeveloped 'native' lands that might affect biological resources.

The Commission is therefore concurring with this consistency certification as conditioned. If this condition is accepted, when combined with: (1) the mitigation commitments made through the project EIR/EIS (Exhibit 17) and the Section 7 consultations with the U.S. Fish and Wildlife Service and NOAA Fisheries (Exhibits 18-19); (2) conditions imposed by coastal permitting agencies; (3) with the review opportunities available for further refinement and specificity available through the regulatory processes to come in the coastal zone; and (4) the potential protection retained through the federal consistency "reopener" clause, the project will improve agricultural viability, halt seawater intrusion, and avoid indirect effects of inducing growth or agricultural extensions into lands not currently in production. As conditioned, the project would therefore be consistent with the requirements of Sections 30250 and 30254 concerning concentration of development, public works facilities, growth inducement, and reservation of limited public services for priority uses. The Commission wishes to be clear that the reopener clause is available and will be relied on for future project changes affecting the coastal zone, including use of the imported water to serve non-agricultural uses. If PVWMA does not accept this condition, the Commission's decision is treated as an objection, and the PVWMA has the ability to appeal the objection to the Secretary of Commerce (as discussed on page 18).

Also, the Commission wishes to be clear that the reopener clause is available and will be relied on for future project changes affecting the coastal zone, including use of the imported water to serve non-agricultural uses. Any subsequent coastal permit or federal consistency application to allow any of the water supplied by this project to be used for domestic use would need to be accompanied by the same level of project commitment to protect agriculture and be consistent with Coastal Act and relevant LCPs as applicable

C. Environmentally Sensitive Habitat Areas, Wetlands, and Water Quality.

Section 30240 of the Coastal Act provides for the protection of environmentally sensitive habitat areas. Section 30233 provides for the protection of wetlands. Sections 30230-30232 provide for the protection of water quality. These Sections provide:

Section 30240. *(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.*

(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.

Section 30233(a). *The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to…: [8 types of allowable uses, including… (l) New or expanded port, energy, and coastal-dependent industrial facilities; (2) Maintenance dredging; (3) In wetland areas only, entrance channels for new or expanded boating facilities; (4) In open coastal waters, other than wetlands, new or expanded boating facilities and the placement of structural pilings for public recreational piers; (5) Incidental public service purposes, including but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines; (6) Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas; (7) Restoration purposes; and (8) Nature study, aquaculture, or similar resource dependent activities.]*

Section 30230. *Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.*

Section 30231. *The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.*

Section 30232. *Protection against the spillage of crude oil, gas, petroleum products, or hazardous substances shall be provided in relation to any development or transportation of such materials. Effective containment and cleanup facilities and procedures shall be provided for accidental spills that do occur.*

As noted previously in this report, approximately 50% of the Pajaro Valley service area is comprised of native and undeveloped land. Much is this area contains wetlands and environmentally sensitive habitat, including the extensive Watsonville Slough System wetland complex. The Commission recognized this slough system's value in its analysis of the City of Watsonville Major Local Coastal Program (LCP) Amendment Number 1-99, in which the Commission noted:

> *Watsonville Slough System*
>
> *The Watsonville Slough System extends from areas well inland of Highway One all the way to the Monterey Bay. The Slough System includes approximately 800 acres of (flat) wetland area. Although difficult to estimate with any degree of accuracy, this Slough System has been reduced in scale over time. Farming in and around the sloughs has been ongoing since the 1850s, and much of the sloughs have been channelized, graded, and used for agricultural production or grazing at one time or another. Encroaching urbanization in and around the City of Watsonville has also led to direct encroachment into slough areas over time. Best estimates are that the Watsonville Slough System once included over 1,000 acres of wetland slough habitat. It is likely that the Slough System was once even larger given that these estimates are based on sparse historical data going back approximately 120 years.*
>
> *Despite its historical reduction, the Watsonville Slough System remains a very important ecological system. It contains significant areas of fresh and salt water wetland, marsh, and open water areas, riparian and oak woodlands, as well as dune and coastal scrub communities nearer the coast. The diversity of habitat and its coastal location along the Pacific Coast Flyway combine to make the Slough System an important resting, feeding and refuge area for migratory, seasonal and resident waterfowl. In addition, the Slough System is home to many other birds, amphibians, reptiles, and other animals – some of these species protected by the Federal and State Endangered Species Acts – which likewise use this diverse habitat. The rich prey base supports a high diversity of raptor and other predators. Various plant species of concern, some of these endangered as well, are also prevalent in the Slough System. United States Fish and Wildlife Service (USFWS) and CDFG have both submitted comments on the proposed LCP amendment that indicate that the Watsonville Slough system as a whole …is biologically sensitive habitat particularly worthy of vigilant protection….*

The project EIR/EIS also notes the extensive wetlands complexes and environmentally sensitive habitat areas (ESHAs) present and analyzes both direct effects due to construction activities (including impacts from construction of pipelines across sloughs, drainages and the Pajaro River within the coastal area, sedimentation of the channels outside of the construction area during trenching activities, loss of riparian vegetation and stream function as wildlife and fishery habitat, and loss of special status natural communities), as well as indirect effects from potential

pressures to convert wetlands and ESHAs to agriculture or other uses. First, the EIR/EIS notes the presence the following primary wetland complexes: the Pajaro River (and tributaries Salsipuedes and Corralitos Creeks) and Lagoon, Watsonville, Harkins, McCluskey, Bennett, and Hanson Sloughs. These wetlands habitats, as well as upland habitat, include the following species important and sensitive spices identified in the EIR/EIS (see Exhibit 16 for complete list of special status species, and Exhibit 15 for table of habitat losses by acreage):

> California red-legged frog (*Rana aurora draytonii*);
> steelhead (*Oncorhynchus mykiss*);
> western pond turtle *(Clemmys marmorata)*;
> Tidewater goby (*Eucyclogobius newberryi*);
> California red-legged frog *(Rana aurora draytonii);*
> California tiger salamander (*Ambystoma californiense*);
> Several listed fairy shrimp species (in degraded vernal pools): vernal pool fairy shrimp (*Branchinecta lynchi)*, conservancy fairy shrimp (*B. conservatio)*, and longhorn fairy shrimp (*B. longiantenna*);
> yellow warbler (*Dendroica petechia brewsteri*);
> nesting raptors, including red-tailed hawks (*Buteo jamaicensis*);
> yellow-breasted chat *(Icteria virens)*;
> least Bell's vireo (*Vireo bellii pusillus*);
> San Joaquin kit fox (*Vulpes macrotis mutica*);
> Santa Cruz long-toed salamander (*Ambystoma macrodactylum croceum*); and
> Tricolored blackbird (*Agelaius tricolor).*

Next, the EIR/EIS includes extensive mitigation measures to address impacts to these sensitive species. The EIS mitigation measures are contained in full in Exhibit 17; PVWMA summarizes the habitat measures as follows:

> *Mitigation measures to offset the removal of vegetation/habitat and impacts to special-status species include, but are not limited to, employing avoidance or trenchless construction methods where applicable (including the Pajaro River crossing), replanting vegetation, protocol-level pre-construction surveys, biological monitoring during construction activities, restriction of construction periods, the employment of Best Management Practices and Erosion Control Methods, and restoring pre-construction conditions which include pre-determined restoration and monitoring success criteria.*
>
> *Formal consultation with the U.S. Fish and Wildlife Service (USFWS) and NOAA Fisheries under Section 7 of the Endangered Species Act has been completed. A Biological Opinion (BO) was issued by NOAA Fisheries in August 2003 and a BO from the USFWS was issued in 2004.*

Through that consultation, additional mitigation measures are required and incorporated into the project; the Fish and Wildlife Service Section 7 requirements are listed in Exhibit 18 and the NOAA Fisheries requirements listed in Exhibit 19. The Fish and Wildlife Service review

addresses impacts to least Bell's vireo (*Vireo bellii pusillus*), San Joaquin kit fox (*Vulpes macrotis mutica*), Santa Cruz long-toed salamander (*Ambystoma macrodactylum croceum),* Tidewater goby (*Eucyclogobius newberryi*), conservancy fairy shrimp (*B. conservatio),* longhorn fairy shrimp (*B. longiantenna*), California red-legged frog *(Rana aurora draytonii),* threatened vernal pool fairy shrimp (*Branchinecta lynchi),* and the California tiger salamander (*Ambystoma californiense*). The NOAA Fisheries review addresses impacts to steelhead (*Oncorhynchus mykiss*).

These reviews concluded that with the mitigation measures, environmentally sensitive habitat would be protected. The Fish and Wildlife Service concluded:

> *We have reviewed the current status of the least Bell's vireo, San Joaquin kit fox, Santa Cruz long-toed salamander, tidewater goby, Conservancy fairy shrimp, longhorn fairy shrimp, California red-legged frog, vernal pool fairy shrimp, and California tiger salamander, the environmental baseline for the action area, the effects of the proposed action, and the cumulative effects during the preparation of the biological and conference opinion. It is the Service's biological opinion that the revised basin management plan projects for the Pajaro Valley, as proposed, are not likely to jeopardize the continued existence of the least Bell's vireo, San Joaquin kit fox, Santa Cruz long-toed salamander, tidewater goby, Conservancy fairy shrimp, longhorn fairy shrimp, California red-legged frog, and vernal pool fairy shrimp. It is the Service's conference opinion that the revised basin management plan projects for the Pajaro Valley, as proposed, are not likely to jeopardize the continued existence of the California tiger salamander. We base these conclusions on the following:*
>
> *1. Adverse effects to the species are expected to be minimal because relatively few of these species have been observed in the project area to date;*
>
> *2. Small portions of the ranges of some of the species would be affected by the proposed action.*
>
> *a. The 17.7 acres of habitat for the San Joaquin kit fox that would be temporarily affected is of marginal quality.*
>
> *b. The proposed projects will result in no permanent loss and only 1.6 acres of temporary disturbance of riparian habitat suitable for the least Bell's vireo:*
>
> *c. Only 0.47 acre of potential aquatic and streamside habitat for the California red- legged frog will be temporarily disturbed;*
>
> *3. The vernal pool within the project area will be avoided and therefore the likelihood of adverse effects to the Conservancy fairy shrimp, longhorn fairy shrimp, and vernal pool fairy shrimp is low;*
>
> *4. No loss of California tiger salamander habitat will occur;*

5. Underground trenching will avoid most effects to Santa Cruz long-toed salamanders and tidewater gobies;

6. If California red-legged frogs and California tiger salamanders are found in the project area and are at risk, they will be relocated to nearby, suitable habitat; and

7. Reclamation and the PVWMA have proposed measures to reduce adverse effects of the projects on the species.

NOAA Fisheries concluded:

VI. INTEGRATION AND SYNTHESIS OF EFFECTS

The construction of the pipeline to deliver CVP water into the lower Pajaro Valley will capture, harm, injure, and kill juvenile S-CCC ESU steelhead. Stee1head present in areas to be dewatered will be captured and relocated, and a small percentage may die or be injured as a result. All of these fish would be killed if they remained within areas to be dewatered, however. Steelhead present in the action area may be disturbed, displaced, injured, or killed by project activities. NOAA Fisheries expects that all S-CCC ESU present in the areas proposed for dewatering will be captured and removed, except those fish on the Pajaro River mainstem that are undetected within the area to be dewatered. Up to 1000 feet of habitat below the trenchless crossings on Millers Canal, Pajaro River west of Highway 1, and Pajaro River west of Highway 101 may have increased turbidity and sedimentation levels if an accidental release of bentonite occurs, for a total of 3,000 feet. Up to 1000 feet of habitat below each of the crossings at Pajaro River at Graniterock Property (Chittenden), Pescadero, and Sargent Creeks may have increased turbidity levels from construction activities and rewatering of the crossing location, or become contaminated by high levels of hydraulic fluid if an accidental spill occurs, for a total of 3,000 feet. As a result of these sediment and contaminant impacts, steelhead within these areas will be killed or injured. In addition, NOAA Fisheries estimates that a total of 5,100 sq. ft. or river and streambed will be impacted due to temporary loss on instream habitat from open trench pipe construction.

The proposed project minimization and conservation measures avoid and minimize short-term risks to steelhead. Additionally, the use of trenchless construction techniques for some of the stream crossings significantly minimizes adverse effects to steelhead and their habitat.

Most of the open trench pipeline construction activities will occur when the smaller creeks are dry of, on the mainstem Pajaro River (Chittenden Pass), when steelhead are not likely to be present. However, if the Sargent Creek and Pescadero Creek crossings are not dry during the time of construction, capture and relocation efforts will be necessary to minimize the possible adverse effects of work within the wetted channel.

The mainstem Pajaro River currently does not appear to provide juvenile rearing habitats during the summer and fall, primarily due to high water temperatures, sandy substrates, and limited food supplies. Surveys conducted over the past decades (Smith 1982) have failed to detect juvenile presence in the mainstem. However, the survey effort has been inconsistent (Titus et al. 1999) and no recent survey information is available. NOAA Fisheries believes that a small number of juvenile steelhead may be present in the action areas on the main stem Pajaro and Millers Canal. Fish exposed to elevated turbidity levels, sedimentation, or accidental bentonite spills are expected to experience gill abrasion, reduced feeding success, and possibly death depending on the amount and duration of the impacts.

Long-term effects from this project to steelhead may be beneficial due to potential increases in surface flows and potential reduction in urban development pressure in the lower Pajaro River. At worse, long-tem impacts associated with this project are anticipated to neither improve nor further degrade conditions for steelhead in the action area.

Temporary impacts will be localized and sufficient contingency measures are proposed to minimize adverse impacts. At the Sargent and Pescadero Creek crossings, impacts to the sub- population will be minimal and temporary, because the action occurs one time at each site and juvenile steelhead will be relocated with minimal associated death and injury. Impacts to the sub-population due to adverse habitat modification are expected to be low due to the low likelihood steelhead will be present at the mainstem Pajaro River crossings or Millers Canal during construction.

Steelhead reproductive strategy results in thousands of fertilized eggs per adult per year and, in both natural and degraded settings (i.e., the Pajaro River), most eggs do not survive to become adults. Given the naturally low survival chances per individual, the small amount of expected mortality during project construction is unlikely to have a detectable effect on population abundance or viability. The effects of the project are not expected to appreciably reduce the number, distribution, or reproduction of the Pajaro River sub-population of steelhead. This conclusion is based, in large part, on the conservation and minimization measures proposed by the PVWMA to reduce impacts from construction to S-CCC ESU steelhead. Most project- related impacts will be of limited scope and duration, and therefore are not expected to have long-term effects on the survival of the species within the action area or at the ESU level.

As discussed on pages 14-17 (phased review discussion), additional measures may also be imposed by the Commission and/or Santa Cruz or Monterey County when coastal development permits are reviewed (for example, while PVWMA proposes bore-and-jack construction or directional drilling to tunnel under the Pajaro River crossing, the Commission will want to review the specific technical details and drilling plans to assure the risks from spills and sedimentation are minimized, and to determine the construction is proposed in the least environmentally damaging manner).

Addressing indirect impacts, PVWMA acknowledges the potential for the water to be used to serve currently non-agricultural lands, which PVWMA also acknowledges could have significant environmental impacts. However, PVMWA states: "Predicting exactly what and where the impacts would occur would be speculative." As was the case for the growth-inducement issue discussed in the previous section of this report, PVWMA relies on other regulatory processes to address the issues raised. Thus, PVWMA has committed to:

> ***CEQA Compliance.*** *Delivery of CVP water for use in areas beyond the 30,200 acres of agricultural lands [shown in Figure 4.C-2 of the Revised BMP EIR] shall be permitted only in accordance with the terms for delivery to Contractor's Service Area pursuant to any contract for the delivery of CVP water between Reclamation and PVWMA, and in accordance with any and all laws, including CEQA and NEPA. The appropriate local land use agency will be the lead agency for preparation of an environmental document for any proposed land use changes; PVWMA will be the lead agency for any actions specific to water system improvements or other PVWMA actions needed to provide CVP water [to areas beyond those shown in Figure 4.C-2].*
>
> ***Endangered Species Act Compliance.*** *PVWMA will not deliver water for the purpose of converting any native lands to agriculture uses unless and until the project sponsor has complied with the Endangered Species Act and has determined that such conversion will not likely affect listed species or that appropriate mitigation has been provided. PVWMA intends to provide CVP water to existing irrigated agricultural lands. PVWMA currently is not proposing to provide any CVP water for M&I purposes, nor is it proposing to provide CVP water outside of the approximately 30,200 acres of agricultural lands [shown in Figure 4.C-2 of the Revised BMP EIR]. If PVWMA is the lead agency for development of water system improvements and construction or operation of those improvements or any other PVWMA actions that could adversely affect threatened or endangered species, PVWMA will consult with the appropriate resource agency (California Department of Fish and Game, US Fish and Wildlife Service, and/or National Marine Fisheries Service) pursuant to all applicable laws, including CEQA and NEPA. PVWMA will implement project-specific mitigation measures and permit conditions as appropriate.*

Also as the Commission expressed in the previous section of this report, the Commission is not as sanguine as PVWMA that existing regulatory mechanisms will avoid pressures to convert sensitive habitat areas. For similar reasons as discussed in previous two sections of this report, in order to assure the project's conformance with the applicable Coastal Act habitat and water quality policies, an additional condition is necessary (see page 4) which would clarify and require that require that, absent further approval by the Coastal Commission, imported water from this project will not be used to serve, within the coastal zone or in a manner affecting the coastal zone: (1) land uses other than agricultural; (2) lands other than those already in agricultural production; or (3) expansions of the agricultural operations into areas where such expansion would result in adverse environmental effects, such as the conversion of environmentally sensitive areas and/or undeveloped 'native' lands that might affect biological resources.

With this condition, combined with: (1) the mitigation commitments made through the project EIR/EIS (Exhibit 17) and the requirements of the Section 7 consultations (Exhibit 18-19); (2) conditions imposed by coastal permitting agencies; (3) with the review opportunities available for further refinement and specificity available through the regulatory processes to come in the coastal zone; and (4) the potential protection retained through the federal consistency "reopener" clause, the project would be consistent with the environmentally sensitive habitat, wetlands, and water quality policies (Sections 30240, 30233, and 30230-30232) of the Coastal Act.

Finally, as it noted in the conclusion to the previous section of this report, the Commission also wishes to be clear that the reopener clause is available and will be relied on for future project changes affecting the coastal zone, including use of the imported water to allow agricultural operations to expand to lands not currently in agricultural production, especially where it would have adverse effects on environmentally sensitive habitat and/or wetlands. Further, any subsequent coastal permit or federal consistency application to allow any of the water supplied by this project to be used for such purpose would need to be accompanied by the same level of project commitment to be consistent with Coastal Act and relevant LCPs as applicable

III. Substantive File Documents

1. The Pajaro Valley Water Management Agency Act, California Water Code Appendix Chapter 24, Sections 124-1 to 124-1108.

2. Pajaro Valley Water Management Agency Revised Basin Management Plan Project, August 2003, United States Department of the Interior Bureau of Reclamation.

3. Pajaro Valley Water Management Agency Revised Basin Management Plan, Environmental Impact Report SCH# 2000062030, Pajaro Valley Water Management Agency October 2001.

4. Monterey County, Santa Cruz County, and City of Watsonville Local Coastal Programs (including City of Watsonville Major Amendment Number 1-99).

5. Appeal No. 94-81, Watsonville Sewage Treatment Plant

6. Santa Cruz County Coastal Development Permit No. 04-0258.

7. Local Water Supply and Distribution System Projects Environmental Impact Report, 1999.

8. Revised Basin Management Plan Environmental Impact Statement, US Department of the Interior Bureau of Reclamation, the Record of Decision signed in 2004.

9. “Section 7” Consultations, U.S. Fish and Wildlife Service (Biological and Conference Opinion No. 1-8-03-F-44, dated March 19, 2004) and NOAA Fisheries (National Marine Fisheries Service) (Biological and Conference Opinion No. 151422SWR01SR849, dated August 15, 2003).